but of human existence. The blow was parried by the wisdom or the folly of the vast majority of mankind, who refused to purchase a chance of saving their souls with the certainty of extinguishing the species."

The substance of "Adonis, Attis, Osiris" is the story of how their faiths provided the machinery for Christianity. The moral of it is the historical appraisement of Occidental religion in modern culture which the student who runs may read. A. E. CRAWLEY.

HABERLANDT'S PLANT ANATOMY.

Physiological Plant Anatomy. By Prof. G. Haberlandt. Translated from the fourth German edition by Montagu Drummond. Pp. xv + 777. (London: Macmillan and Co., Ltd., 1914.) Price 25*s*. net.

ANATOMY, whether of animals or of plants, is apt to prove dull reading if treated merely from the descriptive point of view. Such books we know; some have even been translated into English—it is hard to say why, for they are mere repositories of dry facts, and the individual dry bones, one would have thought, could well enough have been dug out of the original treatises whenever they were wanted. It is only when it is related to, or becomes part of, a larger and more philosophical scheme that anatomy becomes attractive to the ordinary scientifically minded reader who is not a specialist in the subject.

The great charm of Prof. Haberlandt's book has always lain rather in the circumstance that the anatomical facts had there been welded into a coherent theme of which the *leit motiv* was Function. It is true that speculation sometimes usurps the place of proof, and that teleology now and then breaks out, cloaked but thinly in the disguise of physiology. But it is a great book, and the fact that it has passed through four German editions, each an improvement on its predecessor, is a testimony to its intrinsic value.

Now that it is accessible to the English reader who happens to be unacquainted with German, its influence will be more widely felt amongst the students of botany in English-speaking countries. It deserves to be well received, for Mr. Drummond has discharged his task with ability, and by deciding on a somewhat free style of translation he has succeeded in producing a very readable volume which contains but little trace of its exotic origin.

In so far as we have tested the translation, we have lighted upon remarkably few errors of any importance; but perhaps it is not altogether superfluous to point out one instance in which a closer adherence to the text would have been of advantage. On p. 550, in discussing the relations existing between the assumed micellar structure and differential imbibition, the micellæ are said to "cohere with different intensities in different tangential planes." By translating the German word *richtungen* (directions) as *planes*, the meaning of the passage is obscured, and a situation already sufficiently complicated is rendered less intelligible.

It may be questioned whether any good purpose has been secured by placing all the notes at the end of the book, instead of grouping them with the chapters to which they severally belong, as they appear in the German edition. But this is, after all, a trifling matter, and at the most detracts but little from the excellent form in which a valuable and indeed classical work has been presented to the English reader. J. B. F.

ELECTROTECHNICS.

(1) *Switchgear and the Control of Electric Light and Power Circuits*. By A. G. Collis. Pp. 85. (London: Constable and Co., Ltd., 1913.) Price 1*s*. net.

(2) *Elementary Theory of Alternate Current Working*. By Capt. G. L. Hall. Pp. vi + 195. (London: *The Electrician* Printing and Publishing Co., Ltd., n.d.) Price 3*s*. 6*d*. net.

(3) *Electricity in Mining*. With plans and illustrations. Siemens Brothers Dynamo Works, Ltd. Pp. xiv + 201. (London: C. Griffin and Co., Ltd., 1913.) Price 10*s*. 6*d*. net.

(4) *Electric Circuit Theory and Calculations: a Practical Book for Engineers, Students, Contractors, and Wiremen*. By W. Perren Maycock. Pp. xiv + 355. (London and New York: Whittaker and Co., 1913.) Price 3*s*. 6*d*. net.

(1) IN the preface to this manual the reader is referred for further information to the author's larger work on the subject. The present book would have been more valuable had it been carefully prepared. Some of the diagrams of the connections are inaccurate, and it is very difficult to make out what they mean.

(2) This work can be well recommended to those who are seeking the elementary theory of the subject. It has been compiled with accuracy and care, and forms a good introduction to the larger works on the subject of alternate current working. The latest developments are dealt with, and the whole treated in a simple manner without the aid of advanced mathematics.

(3) The novelty attaching to this work lies in the fact that it is compiled by a firm of electrical engineers. It is not a mere catalogue or description of electrical apparatus, but goes further, and deals with the technical part of the subject. The illustrations are good, and the book is well produced.

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(4) This is one of Mr. Maycock's many works on electrical subjects, and is intended to deal with the requirements of Grade I. and the final examinations in electric wiremen's work of the City and Guilds of London Institute. It is therefore essentially a book for beginners, and as such can be recommended. It contains a number of questions and their solutions.

OUR BOOKSHELF.

Careers for Our Sons. A Practical Handbook to the Professions and Commercial Life. Edited by the Rev. G. H. Williams. Pp. xii + 564. Fourth edition. (London: A. and C. Black, 1914.) Price 5*s*. net.

THAT this book has reached a fourth edition since its first appearance ten years ago is an indication of its usefulness to parents and guardians. There are few more baffling tasks than to find a suitable opening for a boy whose school and college training are completed, but who has no clear idea of what he desires to do to secure a livelihood. To those who are face to face with the problem this complete and well-arranged compilation may be recommended confidently. Mr. Williams is an old schoolmaster who has supplemented his own wide experience by much valuable information gathered from a large number of experts.

Manks Antiquities. By P. M. C. Kermode and Prof. W. A. Herdman. Second edition. Pp. 150. (Liverpool: University Press, 1914.) Price 3*s*. net.

THE first edition of this book, which was out of print for some time, was reviewed at length in the issue of NATURE for June 14, 1906 (vol. lxxiv., p. 152). During the ten years since the original appearance of the work, the authors have explored several additional prehistoric sites, and a systematic survey of the antiquities of each parish has been undertaken by a committee of the Isle of Man Natural History and Antiquarian Society. From these and other sources much new material has been worked into the present edition of the book, which will prove of interest and service to the people of the island and their summer visitors.

Royal Society of London. Catalogue of Scientific Papers, 1800–1900. Subject Index. Vol. iii., Physics. Part II., Electricity and Magnetism. Pp. xv + 927 + vii. (Cambridge: The University Press, 1914.) Price 15*s*. net.

IN the review of the first part of the third volume of the Royal Society's catalogue of scientific papers, which appeared in NATURE on May 22, 1913 (vol. xci., p. 289), the general plan and scope of the work were described. It will be sufficient to say of this part that it completes the subject index on physics, deals with electricity and magnetism under the registration numbers 4900 to 6850, and contains 23,300 entries. This makes in all 56,644 entries for the subject physics for the years 1800–1900 inclusive.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Active Nitrogen.

IN view of the apparently inexplicable contradiction between the results of Tiede and Domcke (*Ber.*, 1913, 46, 340 and 4095) and Baker and Strutt (*Ber.*, 1914, 47, 801 and 1049) on this subject, Tiede and Domcke offered to visit London with their apparatus, and it was arranged that each pair of experimenters should repeat their experiments in presence of the other. This was done, and as a result it was agreed that Tiede and Domcke were justified in their statement that the addition of a trace of oxygen to the azide nitrogen increased the intensity of the glow. With the form of discharge vessel and the electrical equipment used by them it was possible to diminish the afterglow considerably, and then to restore the brilliancy of the glow by the addition of an infinitesimal trace of oxygen, liberated by gentle heat from silver oxide. When the amount of oxygen added exceeded this very small quantity, the glow entirely disappeared, as all former experimenters have agreed.

On the other hand, employing the form of discharge vessel used by Baker and Strutt, which has not been described in detail, but is better designed for obtaining the glow, it was not found possible to observe any distinct diminution in the intensity of the glow, even when the vessel was washed out several times with nitrogen prepared by Tiede and Domcke with their own materials, as used in the previous experiment. It is always possible that if the experiment had been more prolonged a different result might have been obtained.

It appears, therefore, that a sample of nitrogen may be made to give the glow more easily if it is mixed with a trace of oxygen. On the other hand, the purest nitrogen with which we have worked in our joint experiments in London is capable of giving a brilliant glow under the experimental conditions used by Baker and Strutt.

It seems possible that the effect of the infinitesimal trace of oxygen is to alter the conditions of discharge so as to make it more suitable for the production of active nitrogen. Prof. Warburg's observations of the effect of traces of oxygen on the kathode fall in nitrogen tends to confirm this idea. Possibly other substances than oxygen may be found eventually to produce the same effect.

H. B. BAKER.
ERICH TIEDE.
R. J. STRUTT.
EMIL DOMCKE.

Imperial College of Science and Technology,
London, July 2.

The Horns of the Okapi.

HITHERTO it has been considered that the horns of the male okapi, with the exception of the bare antler-like terminal caps, are permanently covered with hairy skin, like those of giraffes. The skin and skeleton of an old male okapi recently sent to Messrs. Gerrard, of Camden Town, by Dr. Christy, seem, however, to indicate that, extraordinary as it may appear, true horn-sheaths, like those of antelopes, are developed in at least some individuals. The skull, which, from the condition of the teeth, indicates an animal at least

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